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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,875	03/15/2004	Christoph Petter	240154US0	8346
22850	7590	04/14/2005	EXAMINER	
OBLOON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MCCLENDON, SANZA L	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 04/14/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,875	<b>Applicant(s)</b> PETTER ET AL.	
	<b>Examiner</b> Sanza L. McClendon	<b>Art Unit</b> 1711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/04 &amp; 6/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8, 13-15, 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-8 read as if the powder of claim 1 has additional components. It is unclear if applicant is intending for these to be additional components or if applicant is intending to further define the components of claim 1.

The process claims 14-15 read as if the process comprises further processing steps (claim 14-15). It is unclear if applicant is intending for said additional steps to actually be part of the process or if applicant intending to claim different processing steps (claims 14-15).

The molding claims 17-20 are defined in terms of the composition and thus are unclear for the same reasons for claims 1-8 above (i.e., the actual compositional components). Clarification is requested.

3. The term "unregulated" in claim 3 is a relative term which renders the claim indefinite. The term "unregulated" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Preliminary Claim Observations***

4. The examiner contends the preamble “sinter powder” and the future intended use “for selective laser sintering” have not been considered as claim limitations. With respect to the preamble, there is no structural limitation in the body of the claim to suggest weight be given to the term “sinter powder”. See MPEP §2111.02. With regard to the future intended use limitation, case law holds “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation”. See **Rowe v. Dror**, 42 USPQ2d 1550 and **Catalina**, 62 USPQ2d 1785.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lescaut (6,123,987).

Lescaut teaches polyamide-based coating powders. Said coating is a pulverulent mixture comprising a polyamide, such as Nylon 6, 11, 12, or copolyamides, with minor amounts of at least one phenolic polycondensate and/or at least one polyalkyl (meth) acrylate. Said phenolic condensate and alkyl (meth) acrylate can be found in amounts for 0 to 40 parts by weight each based on the polyamide, with the proviso that the total amount of (A) + (B) is at least 5 parts by weight based on the polyamide. This appears to anticipate claims 4-5. Said polyamide powder can be produced by well-known techniques, such as grinding granulates, dissolving granulates into hot solvents and precipitating by cooling or

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else directly by using processes for anionic polymerization of the monomers in solvent for which the polymer separates in powder form. Said polyalkyl (meth) acrylates results from the polymerization or copolymerization of one or more alkyl (meth) acrylates containing 1 to 12 carbon atoms in the alkyl portion, such as methyl methacrylate—see column 3. Said polymethyl methacrylates and phenolic condensates can be in the form of a powder whose particle size is as close as possible to that of the polyamide, wherein these can be mixed to form said powder coating. Or to have uniformity in size of the powder particles, it is possible to mix particles of different sizes and grind the components to said uniform size. When said particle sizes are different it is also possible to dry blend, then melt the combination, extrude the melt to produce granulates and finally grind to the required size—see column 3, lines 44-56. These mixing methods appear to anticipate claims 13-15. In addition, the powder mixture can include additives, such as those found in columns 3-4, wherein fillers, such as metal particles, such as aluminum and tension agents for promoting spreading, and pigments. Said tension agents for promoting spreading are deemed to anticipate the flow auxiliary. It is noted that said polyamides taught are silent to whether they are regulated or unregulated, however the examiner deems that broad teaching of polyamide encompasses all forms of polyamides, including unregulated.

Claims 1-15 are read in the reference.

7. Claims 1-6, 9-10, 13-14 and 16-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Staas (4,415,706).

Note: claims 17-25 are product-by-process claims and therefore “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on the method of production. Therefore, if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process—see *In re Thorpe*, 227 USPQ 967 (Fed. Cir. 1985).

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Staas teaches compatible blends of polyglutarimides and polyamides. Said polyamides can be polylactams, such as nylon 6, nylon 11, and nylon 12. Staas teaches said polyglutarimides can be found in amounts from 1 to 99 parts by weight and said polyamides can be found in amounts from 99 to 1 parts by weight. This appears to read on claims 5-6. Said polyglutarimides appears to anticipate PMMI of claims 1, 5-6, 14, 17, and 21-22. Melt blending or solvent blending processes can form said compatible polymer blend. This appears to anticipate claim 13-14. In addition to the PMMI and polyamide other processing components can be added, such as fillers, reinforcing agents, colors, pigments, flame retardants, processing aides and others—see column 6, lines 20-21. Said compatible blends can be compression molded to make articles having improved optical clarity and toughness—see column 6 and 7. These molded articles appear to anticipate the moldings of claims 16-23.

Claims 1-6, 9-10, 13 and 16-23 are read in the reference.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickens, Jr. et al (6,123,948) in view of Staas (4,415,706).

Note: claims 17-25 are product-by-process claims and therefore “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not

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depend on the method of production. Therefore, if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process—see *In re Thorpe*, 227 USPQ 967 (Fed. Cir. 1985).

Dickens, Jr., et al teaches sinterable semi-crystalline powders and articles obtained by selective laser sintering of said powders. Dickens, Jr. et al teaches nylon 11 is a good polyamide for selective laser sintering because the articles obtained have good transparency, as well as other nylons—see column 20, lines 5-13 and column 21, lines 64-68.

Dickens, Jr. et al does not expressly teach mixing said nylons with other polymers, such as PMMI, PMMA or PMMI-PMMA copolymers. However, it is known in the art that polyamides, such as nylon 6, 11, and 12 are compatible with blended PMMI polymers resulting in improved melt flow, melt strength, tensile strength, modulus of the polyamides, such as taught by Staas. Additionally the blending also results in improved impact resistance, ductility, and optical clarity. Dickens, Jr. et al and Staas are analogous art because they are from the same field of endeavor that is optically clear molded products comprising polyamides, such as nylons. Therefore it would have been obvious for an artisan of ordinary skill in the art to obtain a laser sintering molding obtained from a mixture of nylon, such as taught by Dickens, Jr. et al, with PMMI, such as taught by Staas. The motivation would have been a reasonable expectation of obtaining an optically clear objected having improved impact resistance and optical clarity then articles made by nylon alone as found in Staas in the absence of evidence to the contrary and/or unexpected results.

### *Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Sandra L. McClendon".

Sandra L McClendon

Examiner

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SMc